


ENTERING DATA IN AN EXCEL WORKSHEET

In an Excel worksheet, what you see in a cell is not necessarily what's stored in that cell. If you enter a formula, for example, Excel stores the formula but displays its result. When entering numbers, dates, and text, you can go as quickly as you want, without too much regard for how they'll look in your worksheet; afterwards, use cell formatting instructions to specify how you want the cells' contents to display, including such details as decimal places, currency symbols, and how many digits to use for the year. Other cell formatting options let you adjust fonts, colors, borders, and other attributes of a cell or range.

A handful of buttons on your Home ribbon let you bypass dialog boxes for some common tasks, such as choosing a font or changing a range of cells to bold. If you're building a financial worksheet, click the Currency button to ensure that every number in a given range lines up properly and includes the correct currency symbol. To see the full assortment of Excel formatting options, select a cell or range and Format Cells button to the right of the label Font on the Home ribbon's Font group to open the Format Cells dialog box. All available cell formatting options are arranged on six tabs in the Format Cells dialog box.

 Excel 2007 uses Live Preview to show what many of your formatting changes will look like before you actually apply those formats. The Home ribbon's Cell Styles button displays a large assortment of formats you can apply to selected cells, for example; as you move your mouse over each style, your selected cells on the worksheet below change to show you the result of applying that style if you decide to do so. Excel 2007 puts cell-formatting even closer to you at times when you select a range of cells. After selecting text within a cell, a floating cell-formatting tool called the *minitoolbar* appears above your selection. You can choose one of the formats offered on the minitoolbar, or ignore it and the toolbar goes away when you move elsewhere.

USING THE GENERAL NUMBER FORMAT

On a new worksheet, every cell starts out using the General format. When the cell contains a constant value, Excel usually displays the exact text or numbers you entered; in cells that contain a formula, the General format displays the results of the formula using up to 11 digits—the decimal point counts as a digit. (Date and time values follow a special set of rules, as you'll see shortly.) If the cell is not wide enough to show the entire number, Excel rounds the portion of the number to the right of the decimal point, for display purposes only; if the portion of the number to the left of the decimal point won't fit in the cell or contains more than 11 digits, the General format displays the number in scientific notation.

To remove all number formats you've applied manually and restore a cell to its default General format, right-click and choose Format Cells, and then click the Number tab and choose General from the Category list.

NOTE

Although it's not particularly intuitive, there's also a keyboard shortcut that applies the General format instantly to the active cell or current selection: Press Ctrl+Shift+~ (tilde) to reset cells to General format.

CONTROLLING AUTOMATIC NUMBER FORMATS

When you enter data in a format that resembles one of Excel's built-in formats, Excel automatically applies formatting to the cell. In some cases, the results might be unexpected or unwelcome:

- If you enter a number that contains a slash (/) or hyphen (-) and matches any of Windows's date and time formats, Excel converts the entry to a date serial value and formats the cell using the closest matching Date format. If the date you enter includes only the month and date, Excel adds the current year.
- In some cases, Excel picks up formatting from your Windows version; for details of how this interaction works, see "Setting Date and Time Formats," p. 565.



If you import data into a worksheet, Excel might convert values that look like dates or times. For suggestions on how to prevent this from occurring, see "Stopping Automatic Conversions" in the "Troubleshooting" section at the end of this chapter.

- If you enter a number preceded by a dollar sign, Excel applies the Currency style, with two decimal places, regardless of how many decimal places you entered. (If you've used the Regional Settings option in the Windows Control Panel to specify a different currency symbol, Excel applies the Currency style when you enter data using that symbol.)

NOTE

As explained later in this chapter, the Currency style is actually a variation of the Accounting format.

- If you enter a number that begins or ends with a percent sign, Excel applies the Percent style with up to two decimal places.

TIP FROM

EQ & Woody

Excel supports fraction formats as well, but entering data in this format is tricky. If you enter 3/8, for example, Excel interprets your entry as a date—March 8 of the current year—and formats it accordingly. To enter a fraction that Excel can recognize automatically, start with 0 and a space: 0 3/8. Excel correctly enters that number as 0.375 and changes the cell format to Fraction. Although Excel stores the number as 0.375, it is displayed as 3/8.


TIP FROM

EQ & Woody

Excel also supports *compound fractions*—fractions that include a whole number and a fractional number, such as 12 1/8. Enter the whole number part (in this case, 12) followed by a space and then the fraction part. Excel displays the entry as 12 1/8 but stores it as 12.125. You'll find this technique invaluable if you ever have to perform calculations involving historical stock market prices; although most major markets have now moved to decimal pricing, some exchanges still use archaic fractional pricing—16ths, 32nds, even 64ths of a dollar!


- When you enter a number that contains a colon (:), Excel converts it to a time format if possible. If the number is followed by a space and the letter A or P, Excel adds AM or PM to the display format.
- If you enter a number that contains leading zeros (as in part numbers, for example, which might need to fill a precise number of characters), Excel drops the leading zero.
- When you enter a number that contains the letter E anywhere in the middle (3.14159E19, for example), Excel formats the cell using the Scientific option, using no more than two decimal places. In this case, Excel would display 3.14E+19.
- If you enter a number that includes a comma to set off thousands or millions, Excel applies the Number format using the default thousands separator as defined in Windows's Regional Settings. If the number you entered contains more than two decimal places, Excel stores the exact number you entered but rounds it for display purposes to no more than two decimal places.

To override any of these automatic number formats, you have four choices:

- After entering the data, click the Format Cells button (to the right of the Font group name) to open the Format Cells dialog box. (Press Ctrl+1 to quickly open this dialog box.)
 - Enter an apostrophe before entering the number. When you do this, Excel formats the number as text and displays it exactly as entered. Note that this solution might have unintended consequences in formulas that use the value shown in that cell! Such character-based numeric values are nicely used for ZIP Codes and social security numbers, which you don't routinely perform calculations on.
 - Enter a space character before entering the number. This prefix also tells Excel to format the number as text and display it exactly as entered. Note that this technique will not prevent Excel from converting a number to scientific notation, nor will it preserve leading zeros. It will, however, work with all other automatic formatting described in the previous list.
-  ■ Click the Number Format drop-down list and select Text. This is your fastest way if the underlying data stored in the cell is correct and you just want to use a different display format.

AVOIDING ROUNDING ERRORS

It's tempting to assume that because numbers look so orderly in Excel's row-and-column grids, they're also unfailingly accurate. That's not exactly so. To squeeze data so that it fits in a cell, Excel rounds numbers and truncates cell contents, usually without telling you. And there's an absolute limit on the precision of Excel calculations that affects every calculation you make.

-  What's the difference between rounding and truncating? When Excel *rounds* a number, it changes the value displayed in the cell without affecting the underlying number stored in the cell. If you enter 3.1415926 in a cell and format it to display two decimal points, Excel